MYRMECIA

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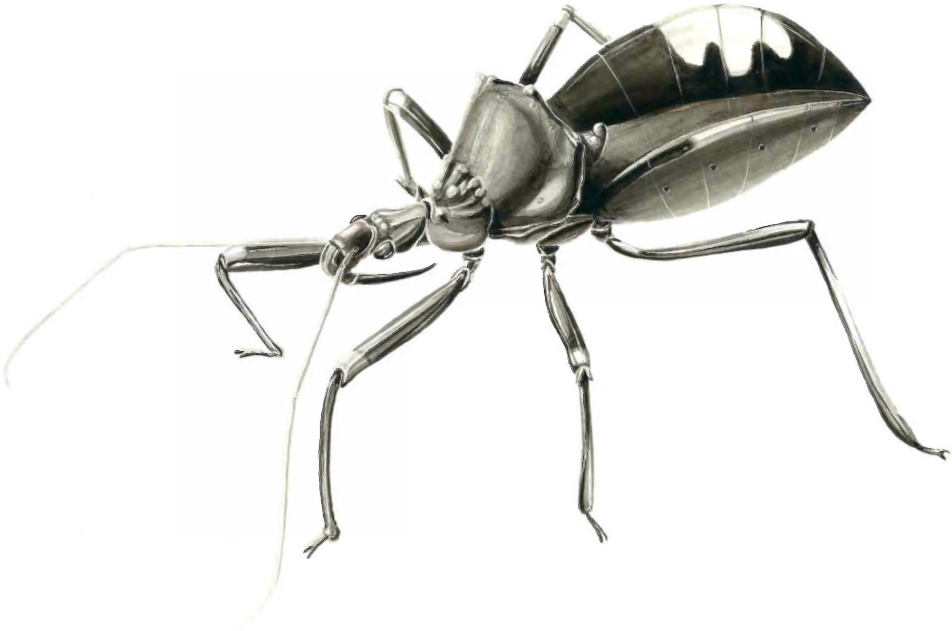

Front cover: Image of an assassin bug , by Luke Davies.

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His Excellency, Major General Michael Jeffery AC CVO MC, Governor-General of the Commonwealth of Australia

SOCIETY SUSTAINING ASSOCIATES
Integrated Pest Management (Bugs for Bugs)

MYRMECIA

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NOTICE

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EDITORIAL

Welcome to the 2007 volume of *Myrmecia.* Hopefully everyone had a great break with beer that was cold and prawns that were barbecued. 2007 brings many things such as the AES conference in Beechworth, Victoria (exceptional mountain biking of all disciplines!), new members to the fold and hopefully some much needed rain. Enjoy this issue and please, if you have anything of interest to the ento community, let me know.

PRESIDENT'S MESSSAGE

Since this is my first entry after taking over as President, may I say how honoured I am to have been elected to this position – I look forward to serving our Society and to encouraging the study and teaching of entomology.

There are a few issues that are of immediate concern to me. One is the steady decline in specialist entomological education in Australia. This is worrying because with increasing international trade, incursions and new pest problems are guaranteed to happen. We need versatile, well-trained entomologists who can address and, hopefully, resolve these new problems. At long last, invertebrates are being considered in biological surveys and as part of environmental impact assessments. They are also increasingly being used as biomonitors of environmental quality. Once again, we need entomologists with a broad taxonomic grounding who are able to readily identify the vast amount of material that is being collected. We also need taxonomists who can give names to the sorted material. At present the latter service is largely being performed by a large band of amateurs, retired entomologists, and people who have been made redundant then subsequently re-employed on soft money. This cannot go on forever, meaning that a new generation of taxonomists is urgently needed. Then there is climate warming, which may well lead to changes in insect distributions, potential extinctions of species with stenothermic ranges, plus potential new pest and disease problems. This would also require more effort from entomologists to track and possibly ameliorate these changes.

Clearly there is a continuing and growing need for entomologists in this Country. However, a group of Australian entomologists recently put in a bid to the Commonwealth to fund a Cooperative Entomology Curriculum for Australia, which was to have been taught by a range of universities by means of a flexible delivery arrangement. This bid was strongly supported by the Society, both financially and through the Education subcommittee. Unfortunately it was not successful, so the

initiative is not likely to proceed. Although this is an opportunity lost, we should not give up and I urge all members to lobby wherever and whenever possible to reactivate and support this excellent initiative.

Another matter that concerns me is the slight decline in membership numbers and the not inconsiderable number of unfinancial members. With the ready access to Blackwell Synergy, I realise that it is now possible to view our Journal for 'free', so maybe the incentive to pay annual subscriptions has been taken away. However, there is more to our Society than access to the Journal. I have attended many of our AGM's over the past 30 years, and have built up a much-appreciated group of contacts and colleagues. In short, it has enabled me to fully integrate with the entomological community. By not supporting the Society, young entomologists are denying themselves of this wonderful opportunity. So, in the interests of becoming the 'complete entomologist', I urge all of you to continue with your membership and, if you are in arrears, to come back and support the Society, a Society that can be of great benefit to you and to our profession.

Finally, new researchers in entomology face an increasing struggle to establish themselves compared with scientists who commenced their careers in Australia in the easier conditions that prevailed in the 1960's to the 1980's. Tenure has all but disappeared and the new RQF requirements mean that it is harder for new researchers to publish their works in the appropriate high impact factor journals. One way of assisting the next generation of entomologists might be to establish a mentorship programme to assist those who represent the new generation of entomologists. This is another reason why membership of our Society and attendance at conferences is highly desirable for all concerned.

By the time you read this you will have finished the annual round of festivities and will be readying yourself for the New Year. May I wish you a successful one, with ongoing employment, adequate research funds, and numerous (high impact factor?) papers!

Jonathan MAJER

EXECUTIVE REPORT

The Executive met on 9 November, 14 December and 11 January.

Recently Elected New Members

Elected 13 July 2006

Mr James HEREWARD, Indooroopilly, Qld (Student)

Elected 10 August 2006

Dr Martina BERNARD, Kallista, Vic (Full)

Elected 19 October 2006

Mr Adam BROADLEY, Melbourne, Vic (Full) Adam's main interests are: quarantine entomology and invasive species, especially timber pests belonging to the Bostrichidae and Cerambycidae. His other interests include glowworms of the genus *Arachnocampa* (Diptera: Keroplatidae) and bioluminescence in insects generally.

Elected 23 November 2006

Mr Nicholas STEVENS*, SA (Student)

*Nick won his membership at the Adelaide Conference, September 2006.

The imminent relocation of **Andrew Mitchell** to Wagga Wagga has meant he has resigned as Membership Secretary. **Graham Thwaite** will now take on responsibility for membership issues. **Paula Crain** has come on board to provide clerical support for the Executive, which means taking minutes of the meetings and providing clerical support for the treasurer.

Governance Issues

The Executive has appointed a Privacy Officer. This was a proposal initiated by the

previous Executive and we are pleased to announce that **Jane Wright** has accepted the appointment. Her role will be to determine the society's responsibilities under privacy legislation and ensure that we do not transgress. Jane is now in the interesting position of being our Public Officer as well as our Privacy Officer.

Treasurer's activities

The Treasurer and Membership Secretary mailed out subscription notices in December to cover the half year Jan-June 2007. Following the constitutional change approved at the last AGM to change the society year from a calendar year to a financial year, current membership subscriptions are for six months only with the next full year subscription due on July 1.

To date, approximately 250 subscriptions have been received which means that about half the society membership still owes for this half year. Members are urged to bring their membership up to date.

The treasurer is still trying to resolve the access to e-Journals with Blackwells as agreed by the Executive following the Adelaide Conference. The intention was that all e-Journal subscribers could have e-access to all back issues. We need to clarify if the same can apply to paper subscribers, although some of those do not have internet access. The instructions on how to do this should be placed in May *Myrmecia*. Access to pre-Blackwell journal volumes will be freely available on the Blackwell website.

News Bulletin Editor's activities

Recent issues of *Myrmecia* have had some problems because of issues with various printers. The last issue, for example, was submitted to the printer as a PDF file. The printer converted it to a Word document (without telling Aaron), which meant it lost much of the formatting, and printed it as it was. This is why most of the photographs were either too dark or severely trimmed. Aaron has now selected another printer who seems to understand the requirements (this is the first edition using Scarrs Printing so it's much better, isn't it.). Following a successful scientific illustration competition in 2006, two images have been chosen for the front covers of the *Australian Journal of Entomology* and *Myrmecia*. These were not the winning entries but were chosen for their charisma and dimensions which fit nicely onto the covers of their respective titles. Congratulations to Debra Gluszek whose illustration of a tailed emperor butterfly will adorn the 2007 issues of AJE and to Luke Davies whose illustration of a reduviid bug will appear on the front cover of *Myrmecia.*

Murray Fletcher
Vice President

REGIONAL NEWS

NEW SOUTH WALES

Entomology, Insecticide Resistance-EMAI

Grant Herron met with **Tim Hammond**, Dupont Australia Ltd, to discuss a new chemical that may be of use against aphids and thrips. **Tanya Tomlinson** has returned from 12 months maternity leave and is currently working 3 days per week on Grant's onion thrips study VN04004. **Graeme Gullick** has also gone part time to look after his son. Like Tanya, Graeme works 3 days per week but on study VG06004. **Thalavaisundaram Swaminathan** (Swami) has returned to Entomology, Insecticide Resistance and has been appointed for 6 weeks to assist with the processing of cotton aphid samples. **Martin M°Loon** spent much time processing archival samples of cotton aphid as part of DAN184. With the assistance of **Tanya Smith**, CSIRO Narrabri, and Swami, Martin is processing some 1000 aphid samples for insecticide resistance using real time PCR. **Jeanette Rophail** and Grant met with NCSI, the company doing EMAIs external ISO9001 reaccreditation audit for Entomology, Insecticide Resistance. The auditor checked

all Entomology Insecticide Resistances QA paperwork and the unit passed with a couple of minor suggestions to improve the QA process. **Carolyn Griffin** continued to spend a significant portion of her time helping Jeannette prior to the quality assurance audit. Now that the audit is complete Carolyn will increase her time in the insectary maintaining the insect cultures.

University of New England, Armidale

Dr Nigel Andrew and **Prof Melodie McGeogh** (University of Stellenbosch, South Africa) were successful in having his ARC Discovery grant funded in the latest round: *Ecology of insect herbivore assemblages: influence of climate, evolutionary history and plant traits.* They are currently advertising for PhD students and a Research Assistant. For more details email nigel.andrew@une.edu.au. Nigel is currently bunkered down with Teaching and Learning staff from UNE re-designing his second year undergraduate Entomology unit for 2008. Currently the three modules (Taxonomy and Biodiversity, Forensic Entomology, and Insect Pests and Management) are in various stages of development. The Taxonomy and Biodiversity module will hopefully be ready for a trial run with the Semester 1 2007 cohort of students to iron out bugs and refine the processes.

In January 2007, **Dr Silvia Dorn**, Professor of Applied Entomology at the Institute of Plant Sciences, Zurich, Switzerland, will be visiting UNE and will give a special seminar on 22 January 2007. She will speak on: "Host plant volatiles: seasonal dynamics in emissions and effects on associated herbivores and parasitoids".

EMAI Parasitology

IGR resistance in sheep lice and blowflies The final report for this project was submitted and accepted by *Australian Wool Innovation* (AWI). **Garry Levot** and **Narelle Sales** developed a laboratory test to diagnose resistance to diflubenzuron (or triflumuron) in sheep body lice (*Bovicola ovis*) populations. Prior to this test only long-term expensive pen trials could be used. The laboratory test is still laborious but it appears that results of a single susceptible discriminating concentration test are sufficient to detect resistance.

Lice detection test project: **Paul Young** and Garry met with **Dr. Johann Schroder** (AWI) in early November to discuss a proposal for final development and manufacture of an on-farm diagnostic test to detect sub-clinical lice infestations. AWI had been unable to enlist a commercial manufacturer for the product and was likely to drop the project unless an alternative strategy was adopted. On the basis of the discussion a new project application was submitted via Head Office with a revised budget and milestones. In the meantime Paul is working on ways to shorten the time required to complete the current version of the diagnostic test.

Operator exposure study: Garry spent a few days around Dunkeld in the foothills of the Grampians (central west Victoria) working with colleagues from the University of Queensland and **Greg Richards**, a local sheep dipping contractor, to measure the exposure risk to operators of immersion cage dips using diazinon. Results of this AWI funded project will be considered by the Office of Chemical Safety and the Australian Pesticides and Veterinary Medicines Authority (APVMA) in their regulatory review of the use of diazinon in the sheep (and other) industries.

Small Hive Beetle project: Garry has been involved in the development of an insecticidal refuge trap for Small Hive Beetle, *Aethina tumida*, control in bee hives. With funds provided by the *Rural Industries Research and Development Corporation* several prototype devices were made by a plastics fabrication company before the ultimate design was accepted. Honey residue trial results demonstrated negligible risk to honey and trials in NSW DPI hives demonstrated safety to bees. An application for a Research Permit was submitted to

APVMA in November with a view to conducting further efficacy testing early next year. With assistance from **Mr John Ryan**, Commercialisation Manager with NSW DPI Garry wrote a commercialisation dossier that, we hope, will interest a company to register the product, not only in Australia but also overseas where we have patent protection.

Nigel ANDREW

Orange Agricultural Institute

We bid a fond farewell to **Andrew Mitchell** who is moving to Wagga to join (and manage) the molecular laboratory there. Andrew will continue his barcoding project on agricultural insects in NSW and will therefore maintain close contact with Orange and the collections unit.

Danuta Knihinicki hosted a visit from **Bruce Halliday** in December to work through samples of wheat curl mites and related Eriophyoidea.

Peter Gillespie is coordinating a major project inspecting hazard quarantine sites in the Sydney region for suspect insect occurrences and plant pathogens. The project, funded by AQIS, is targetting port facilities and similar sites where imported goods are stored.

The 10th Annual Entomologists of Orange Xmas Lunch was held on December 19 at the Hotel Canobolas (see photo elsewhere in this issue). With representatives from Orange Agricultural Institute, DPI Head Office, Charles Sturt University, Agrisearch Services, Wagga Agricultural Institute and the ranks of retired entomologists, the lunch was well attended.

Another marital gathering of entomologists occurred in November when **Murray Fletcher** married his partner **Vicki Glover** (see photo). Following a very pleasant day celebrating their nuptials at Borrodell on the Mount overlooking the vineyards and orchards of Orange's Towac Valley, Murray and Vicki honeymooned back at work at OAI.

Murray FLETCHER

Wagga Wagga Agricultural Institute (WWAI)

A new year and a new beginning for the Wagga Wagga Agricultural Institute Entomology research group. For many years at Wagga there has been a small but strong group working mainly in the Stored Grain Insect section. This section is headed by **Dr Jo Holloway**. The focus of this group has been on the research and monitoring of insecticide resistance in stored grain insects, the evaluation of potential grain chemicals, development and promotion of regional management practices for stored grain and insect pests of field crops as well as providing technical advice to all sectors of the field crop and grain storage industry, including bulk handlers, growers, food processors, merchants and advisors. A recent project on IPM strategies by Dr Holloway is supported by growers and the Australian Government through the Grains Research and Development Corporation (GRDC). This research seeks to identify beneficial species across a range of farming systems in the southern region, and investigate strategies that will increase the activity of those species. Jo is assisted by Katrina Underwood who is responsible for Phosphine resistance and monitoring and Kathryn Ellis who is responsible for the laboratory, AGIRD database, protectant assays and field work. The Stored Grain Insect section is also happy to welcome Adam Shephard who has just joined the group as a technical assistant.

Dr Andrew Loch is a research entomologist in Viticulture and is based at The National Wine and Grape Industry Centre (NWGIC), Wagga Wagga, an initiative between the NSW Department of Primary Industries, Charles Sturt University and the NSW Wine Industry Association. Andrew came to the NWGIC after completing a 3 year postdoctoral fellowship as a Forest Entomologist with CSIRO based at Manjimup in Western Australia. His

research focussed on developing effective and efficient pest management systems for the control of insect pests of blue gum, (*Eucalyptus globulus*). This work was conducted as part of the Cooperative Research Centre for sustainable Production Forestry Program of activities within the Resource Protection Program. Following his appointment to the NWGIC as a field entomologist, he has conducted IPM research on major viticultural pests, participated in the NSW Phylloxera survey program and provided entomological extension advice to industry, including delivering information to students and participating in vocational education programs sought by industry.

More recently, we are thrilled to welcome two new Entomologists to the WWAI, who will bring with them new enthusiasm and knowledge. **Dr Andrew Mitchell** is relocating from Orange to Wagga Wagga in late January in order to be closer to the rest of the biotechnology research group and to capitalise on the excellent molecular biology facilities at WWAI. He will continue current collaborative research projects on the molecular systematics and diagnostics of Australian Lepidoptera, Hemiptera and Coleoptera.

Dr Olivia Kvedaras joined us in December 2006 having completed a 3 year postdoctoral fellowship based at the South African Sugarcane Research Institute (SASRI). Olivia's area of research was on the role of silicon in enhancing host plant resistance to the pyralid stem borer, *Eldana saccharina* Walker. In addition to the research, Olivia was also involved in teaching and supervision of postgraduates at the University of Witwatersrand, Johannesburg. In her new role at WWAI, Olivia is directly responsible for fruit fly research in the NSW Exclusion Zone, with a particular emphasis on the use of the sterile insect technique.

Olivia KVEDARAS

Gosford Horticultural Institute

Dr Stephen Goodwin, Senior Research Entomologist at NSW DPI's Gosford Horticultural Institute, has left the Department in late January after over 30 years of service. Stephen began with the Department in 1975 at Rydalmere, quickly relocated to Maitland before transferring to Gosford in 1976. The move to Gosford took him from viticultural entomology into pest management in strawberries. In the late 1970's Stephen had already made concrete advances in pest management and spent a great deal of time in Sydney and on a five acre farm in Kellyville he sourced what he thought might be a potential biological control agent, *Phytoseiulus persimilis*, currently the largest selling biocontrol agent in Australia. This find led to Stephen's first overseas trip for science at the International Acarology Conference in Edinburgh in 1982. Stephen has continued a successful career developing a one-spray strategy for the fig longicorn borer (*Acololepta vastator*) that effectively ended the grapevine borer problem in the Pokolbin area in the early 1990s and successfully entered the Research Scientist grade with the Department in 2001 and also received the Outstanding Contribution Award from the greenhouse industry that same year. Stephen is leaving the Department short one world-class, and world-recognised, IPM specialist - a researcher that was undertaking IPM work well before IPM was a common phrase in agriculture. Like so many entomologists before him, however, he will not be hanging up his hand-lense and his links with industry and the Department will endure for some time to come.

Marilyn Steiner also left NSW DPI's Gosford Horticultural Institute in late January to join Stephen in retirement. Marilyn's contributions to pest management in greenhouse horticulture has also been extremely valuable and full of successes. Marilyn joined the Department as a Visiting Scientist in 1994 after a long career in Canada to search for and identify Australian natural enemies of western flower thrips in greenhouse crops. Her efforts in developing and extending IPM to growers and

colleagues has had many successes, but perhaps the most notable was the discovery of *Amblyseius montdorensis* (AKA *Typhlodromips montdorensis* or "Monties" to their friends) - recognised to be successfully servicing industry needs and in commercial production. The loss of her enthusiasm, drive, skill and knowledge will be a great loss to the Department. Like Stephen, Marilyn won't be letting her traps get any less sticky and will be involved in the greenhouse industry for years to come.

We wish them both all the best in their future endeavours.

Leigh PILKINGTON

TASMANIA

Forestry Tasmania

Simon Grove and **Sue Baker** are continuing to incorporate invertebrate information into the assessment of alternatives to clearfelling being trialled at the Warra LTER site, and have the 'benefit' of access to thousands of pitfall trap samples collected in this BACI study. Preliminary analyses focusing on beetles have suggested that a good response 'signature' can be detected through analysing assemblage compositional data for carabid, leiodid and curculionid beetles only rather than the complete suite of beetle species, which simplifies matters somewhat but still requires a lot of sorting and identification work. To this end, four part-time technical officers have recently been appointed to process these samples over the coming year. They are **Lynnette Forster**, **Russel Lewis-Jones**, **Kate O'Brien** and **Lisa Joy Boutin**.

Simon Grove also reports that readers may have heard that the federal court judge overseeing the court case brought against Forestry Tasmania by Greens Senator Bob Brown concerning logging in Wielangta Forest has recently announced his verdict. One of the three EPBCA-listed species at the centre of the case was the broad-toothed stag-beetle *Lissotes latidens*. The judge decided that the systems in place to protect the three species were inadequate. Brown's case was helped substantially by there being no definition of 'protect' in the Tasmanian Regional Forest Agreement, which meant it was left for the judge to put his own interpretation on what this word means. It remains to be seen what his decision means for the beetle, for conservation and for forestry in Tasmania. However, he chose a very narrow, static definition for 'protect' that, as it stands, could have major repercussions, and not only for forestry. Would conservation managers be breaking the law if, say, orange-bellied parrot numbers don't increase under their care? Ironically, the week he handed down his judgement, a bushfire swept through most of Wielangta, which may not have pleased the nesting wedge-tailed eagles or swift parrots, though Simon doubts that the stag-beetles minded much. Which may beg the question, will Bob Brown take God to court next?

Department of Primary Industry, Water and Environment

Cathy Young recently spent a few weeks in South Africa researching a cossid moth that has taken a liking to *Eucalyptus nitens* being grown there. Cathy has some interesting stories to tell about the research, entomology and life in general in South Africa which she will share in the near future with other Tasmanian members.

University of Tasmania: School of Agricultural Science and TIAR

Geoff Allen and **Paul Walker** continue to work on the info-chemicals of pests of eucalyptus plantations with the help of summer undergraduate students **Stephen Quarrel** and **Bron Appleby**. **Dr Deepa Pureswaran** (Canadian Forest Service) visited the lab in January to talk about her current research. In July 2006, Paul attended the International Society of Chemical Ecology conference in Spain and visited chemical ecologists in the UK.

Paul WALKER

AUSTRALIAN CAPITAL TERRITORY

ANIC

The last few months have been very busy in ANIC, especially with more than the usual number of visitors. John Lawrence (Gympie) and Rich Leschen (Auckland) visited the beetle team to work on publication plans for the second Coleoptera volume of *Handbook of Zoology*, and to work on lists of characters and taxa for the Coleoptera Tree of Life project. Dr. J. Poorani from the Biological Control Institute in Bangalore, India is also visiting the beetle laboratory, to collaborate with Adam Slipinski on the ABRS-funded project on Scymnine Coccinellidae. Vicki Hatton is helping out as a temporary assistant, doing a preliminary sort of material collected by Ken Green in his Kosziusko National Park pitfall trapping survey, so it can be incorporated into ANIC.

Michael Shaffer (London), ably assisted by Monica Shaffer, spent a few weeks in the Lepidoptera collection, sorting out our Pyralidae. In the process they recognised several genera that are newly recorded from Australia, and as usual, found numbers of undescribed species. They also dramatically improved the collection by sorting several thousand specimens of Pyraloidea into subfamilies. Len Willan (Como NSW) also visited the Lepidoptera collection, to advise Michelle Glover in the fine art of photographing small moths, and adding another set of new images to Lepidoptera on-line. John Hawking (Albury) visited for discussions of his work on aquatic Pyralidae, and Peter Mackey (Brisbane) was also in the Lepidoptera collection, sorting, identifying, and photographing Lymantriidae, as part of his revision of the family.

David Rentz (Kuranda) visited to help train two entomologists from the Museum of Natural History at the University of Los Baños, Philippines in some of our curatorial techniques. Orlando Eusebio worked on the identification and curation of orthopteroids, and Orlando Calcetos did the same for beetles and moths under the guidance of Tom Weir and Marianne Horak, while Jacquie Recsei gave them an overall view of collection management. This visit was a follow-up to the work that Tom Weir and Jacquie Recsei did in the Philippines earlier in the year, and was funded by DAFF. David Rentz also brought some new collections of orthopteroids for incorporation into the collection and helped with their curation, and Paul Brock (London) did some work in the collection in preparation for his illustrated guidebook on Australian stick insects.
The Federal Minister for Education, Science and Training, Julie Bishop, and CSIRO Chief Executive Geoff Garrett, visited ANIC in December. The Minister was shown the remote microscope system and interactive identification products, as well as our normal permanent collections, including both large and spectacular and small but important species of Lepidoptera. She was especially impressed by the opportunity to see some original Joseph Banks plant specimens, which Jim Croft brought from the National Herbarium for the occasion.

There have been a few personnel changes recently. We welcome molecular systematist Dr. Stephen Cameron, who joins us in January, and Chris Manchester, a new Technical Officer in Diptera. We reluctantly said farewell for now to Jacquie Recsei, who has left to work on her Master's degree in Museum Studies at Macquarie University with Ruth Mawson, on a disaster management plan for entomological collections, and on the problems involved in the preservation of collections in hot humid climates. Correspondence and queries that would normally be addressed to Jacquie should go to Tom Weir (Tom.Weir@csiro.au).

The Chief of CSIRO Entomology, Joanne Daly, will leave in April to take over as Group Executive, Agribusiness, in CSIRO Corporate Centre (Canberra). Mark Lonsdale will take over as Acting Chief until a new Chief can be appointed in 2007.

The physical re-organisation of ANIC is now well under way, with both collections and people being moved into different rooms. Visitors and users of the Collection can

expect major disruption to services until at least July, and we ask our colleagues for their cooperation in delaying visits and major loan requests until after July if possible. Please contact us well in advance to check on the accessibility of the collections you need. Telephone numbers and other contact details for people will be unchanged.

In October, Laurence Mound joined Roger Kitching's major biodiversity survey in Lamington National Park. Shortly after Veronica Pereyra of the University of Tucuman, Argentina, arrived for six weeks to study Aeolothripidae and Melanthripidae, including several undescribed Australian species. Simone Heimoana arrived from Narrabri with her usual collection of problem thrips from cotton, and David Teulon of Crop and Food Research, New Zealand, visited for two days in December to discuss aspects of onion thrips biology. Christmas Day was celebrated at the top of Mt Warning in northern New South Wales, and the anticipated undescribed species of thrips was collected by Alice Wells later the same day, the one this year being a gall-inducer.

Tom Weir, Adam Slipinski, Marianne Horak and Ted Edwards did a collecting expedition to Lamington and Mount Tamborine National Parks. One of their objectives was to find fresh specimens of *Rhinoripus*, which are needed to provide molecular data on a basal family of Elateroidea for the Coleoptera Tree of Life project. Despite an intensive collective effort, the creature remained elusive, possibly because of the unseasonally cold weather. Tom Weir and Jacquie Recsei also made a trip to NSW DPI, Orange, to return a collection of aquatic and semi-aquatic bugs that Tom had been checking for inclusion in the APPD database, and to return a collection of scarabs that had been on loan to Ev Britton. Bruce Halliday was also in Orange, for discussions of wheat curl mite taxonomy with Danuta Knihinicki.

There was some cause for celebration recently. On November 29th we had a barbecue to thank the volunteers who do such important work in maintaining the quality and curatorial standard of the Collection. Joanne Daly presented special awards to Sandy Roy, who has done 5 years of voluntary work on improving our spider collections, and Peter MacNicol, who has also been with us for 5 years helping out in the Lepidoptera collection. We are very grateful to Sandy and Peter, and all the other volunteers who donate their time to helping us look after the collection. On the same day we had a celebration of three recent publishing successes. Marianne Horak's book on the genera of Olethreutine Lepidoptera (Tortricidae) has been published. This book is volume 10 in the series *Monographs on Australian Lepidoptera*. An international team of Dipterists including Joanna Hamilton and David Yeates celebrated the completion of *On The Fly*, an interactive CD for identification of families of Australian Diptera, which includes a detailed glossary of Dipteran anatomy, with spectacular illustrations by Anne Hastings; and Natalie Barnett announced the completion of a Learning Federation project, which produced a set of beautifully illustrated fact sheets and data on insects that will be used for teaching biology to students at secondary school level.

Finally we congratulate Katarina Mikac, who was awarded a PhD from the University of Canberra for her thesis *The Population Genetics of the Invasive Psocoptera* (*Liposcelididae*) *Species* Liposcelis bostrychophila *Badonnel and* Liposcelis decolour (*Pearmann*) *in Australian Grain Storage Systems.*

Bruce HALLIDAY

Office of the Chief Plant Protection Officer, DAFF

Janice Oliver has completed her stock-take of current and recently completed fruit fly projects. The stock-take was an important contribution to a workshop convened by Plant Health Australia in Canberra in July to develop a national fruit fly strategy.

Fiona Macbeth has been coordinating the national response to the detection of a new cecidomyiid fly that forms galls on the leaves of mangoes.

In June, Ian Naumann was in Vientiane, Lao PDR to facilitate an SPS workshop and present to the ASEAN Sectoral Working Group on Crops and one of its technical advisory groups. On the way home he visited entomologists and plant pathologists in the Department of Agriculture, Bangkok to develop a series of proposals for projects in 2007. In Bangkok, he caught up with Ms Yuwarin Boontop, a recent visitor to several Australian entomological laboratories. In August, Ian and Emma Lumb travelled to Kuala Lumpur, Malaysia to conduct a meeting to plan 2006-7 activities for the AusAID-funded SPS Capacity Building Program, and to discuss with the Malaysian Department of Agriculture plans for new facilities for their reference collections. In October-November, Janet Wheeler coordinated visits to Australia by several entomologists and plant pathologists from the Philippines. Ian and Janet have just had word that a series of collaborative projects with the Philippines have received funding through to early 2008.

Therese Brackenbury, Jacek Plazinski and Ian Naumann all travelled to Adelaide in September, for the joint Australian New Zealand Entomological Society Conference. Immediately after the scientific conference, Therese and Jacek convened a meeting of the SPHDS Committee.

Ian NAUMANN

QUEENSLAND – FAR NORTH

DPI&F Cairns

Mark Stanaway has commenced a PhD at the School of Mathematics at QUT on evaluating surveillance systems for emergency plant pests. The project is to be funded by the QDPI&F and the CRC for National Plant Biosecurity.

DPI&F Mareeba

Harry Fay and Keith Halfpapp (now retired) have recently heard that DPI&F's application for a patent for a Synthetic Fruitpiercing Moth Attractant has been accepted by IP Australia. Expressions of interest in commercialising the baits which contain the attractant have been called from prospective commercial partners, and these will be evaluated in February 2007. There has been some keen international interest in the bait technology, particularly from Korea, South Africa and the Pacific.

James Cook University

Marine and Tropical Biology PhD Candidate **Kylie Anderson** visited Bamaga once again in November, this time to conduct a short trial on the ability of the island cane planthopper *Eumetopina flavipes* to survive on cut sugarcane (to see if people movement is really an option for this species), and to plant a plot of sugarcane. The plot (if it isn't eaten by wallabies, rats, horses or people) will be used later in the year to conduct an experiment to figure out the natural ability of *E. flavipes* to move through both high and low density sugarcane fields.

Brad Congdon and **Mohamed Sallam** (BSES Ltd) spent two weeks hunting down *Eumetopina* on various species of *Saccharum* in PNG, in a bid to understand the population structure of the pest on a variety of host plants throughout its native region. *Saccharum robustum, S. spontaneum, S. edule* and *S. officinarum* was sampled at various sites from Lae to Ramu, Goroka and Madang. Brad and Sallam were joined by **Kaile Korowa** of Ramu Sugar Ltd. This was the first visit of several planned trips, which are funded through an ACIAR project in collaboration with **Lastus Kuniata**, also from Ramu Sugar Ltd.

Freedom City

During November, **Judy Grimshaw** enjoyed a three week holiday walking in the Andes in

Patagonia. A full range of weather was experienced during the visit i.e. strong winds, heavy rain, snow and also bright sunshine. Fortunately the weather did not interfere with the enjoyment of the mountain and glacier scenery. That tour finished in Ushuaia, so Judy took the opportunity to follow up a lifetime ambition by going on a cruise of the Antarctic Peninsula. The weather for that was perfect and many landings were enjoyed. Lots of penguins had already arrived and were busy 'painting' the rocks pink with their 'poo'. Within days of returning to Australia, Judy packed her goods onto a removals truck and then drove to Brisbane where she is currently unpacking everything and looking forward to the delights of City life.

Kylie ANDERSON

QUEENSLAND - SOUTH

Army Malaria Institute (AMI), Gallipoli Barracks, Enoggera

Bob Cooper spent 5 weeks during September-October in Vietnam conducting entomological surveys to study the malaria vectors in two communes in central and south Vietnam. The work was a collaborative effort involving the Military Institute of Hygiene and Epidemiology, Hanoi; the Military Preventive Medicine Centre, Ho Chi Minh City; and the Institute of Malaria Parasitology and Entomology, Qui Nhon.

In early October, **Steve Frances** gave a talk to the monthly meeting of the Entomological Society of Queensland. The talk was an overview of the history of the Army Malaria Research Unit, and also some of the recent research being conducted by the Vector Surveillance and Control department of AMI. A book entitled "Insect Repellents, Principles, Methods and Uses", edited by **Mustapha Debboun**, **Steve Frances** and **Dan Strickman**, was published by CRC Press in late October. In mid November, **Steve Frances** travelled to Atlanta, USA, to attend the Annual meeting of the American Society of Tropical Medicine and Hygiene. Steve presented a poster on the use of insecticide barrier treatment of military tents as protection against the entry of mosquitoes. He was able to catch up with a number of colleagues including COL **Raj Gupta**, Walter Reed Army Institute of Research, and **Ken Linthicum**, Director of the Centre for Medical, Agricultural and Veterinary Entomology, in Florida. (See photo)

Steve and Bob conducted an annual training course on vector control and surveillance for Army Preventive Medicine technicians during early November. **Sarah Corcoran**, now working at DPI, gave a lecture to the course on quarantine issues.

Des Foley, formally at UQ and now working in the USA, visited the unit in late November. Sadly, **Rob Marlow**, a young entomologist in the unit left in January to continue his military career in a Cavalry unit.

Food Protection Team, DPI&F, Indooroopilly

Pat Collins, **Greg Daglish** and **Manoj Nayak** attended the 9th International Working Conference on Stored Products Protection held in Campinas, Brazil in late October. All three were invited to deliver keynote papers and co-chair three different sessions: Pest Resistance to Pesticides and Control Measures (Pat); New Chemicals and Food Residues (Greg); Psocids, Mites and other Contaminants (Manoj). This is the premier conference in the area of stored product entomology, and a highlight was the appointment of **Pat** to the Permanent Committee. The Food Protection Team ended the year on another high note with **Greg** being invited to become the Regional Editor (Australia and Asia) for the Journal of Stored Products Research. He is replacing the long standing Regional Editor, Bruce Champ, who is an honorary life member of the Australian Entomological Society.

Manoj NAYAK

CSIRO Entomology Long Pocket Laboratories, Indooroopilly

Exciting news from the tropical weeds group is the release of the latest biocontrol agent against the nasty tropical weed, *Mimosa pigra*. It's a flea beetle that goes by the moniker of *Nesaecrepida infuscata* but prefers Nessie. To achieve this result, **Areli Mira**, **Gio Fichera** and **Richard Chan** put in the hard yards in quarantine while Mexican staff **Ricardo Segura**, **Moises Martinez** and **Carlos Pascacio** lost plenty of sweat in the field in the native range. **Tim Heard** compiled the results into an application for release which was accepted by the authorities. We welcome this new agent to Australia and hope that it likes its new home, surely the land of promise for a mimosa herbivore!

New funds from the Federal government and Meat and Livestock Australia are due to re-invigorate the efforts into survey work in tropical America for biocontrol agents against parkinsonia and bellyache bush. Tim Heard spent July in Argentina, Ecuador and Mexico looking for natural populations of these weeds and potential collaborators and contractors to do the job locally.

Chengyuan Xu is a plant physiological ecologist from Columbia University in New York. Cheng has joined the Tropical Weeds team for three years, researching *Lippia*, to find the weak links in the *Lippia* life cycle to help with management of the weed.

In July, **Jeff Makinson** returned to Brisbane from his one year deployment in Singapore. Jeff was chasing the elusive stem-borer for *Lygodium microphyllum*, a serious weed in Florida, USA. He had great success with many of the larvae now in quarantine in Brisbane. Although happy to return home, Jeff still has a hankering for the Asian food and constantly dreams of curry puffs and laksa.

Andy Hulthen and **Lynita Howie** have recently joined the pest team at Long Pocket. Andy and Lynita have worked on Queensland fruit fly with **Tony Clark** at Queensland University of Technology and **Dick Drew** at Griffith, respectively. They will provide technical support to **Nancy** and **Paul De Barro** on a range of projects dealing with silverleaf whitefly, parasitoid searching behaviour, beneficial insects and native vegetation and metapopulation dynamics.

Ahmed Aifi and **Layth Mohammed**, from the State Board of Iraq, are working with the Pests group on integrated pest management. Ahmed and Layth have settled in well with the group, are taking classes in English and now have bicycles to explore their new neighbourhood.

Tim HEARD

United States Department of Agriculture, Agricultural Research Service, Australian Biological Control Laboratory (USDA-ARS ABCL)

Tony Wright visited Thailand and Singapore in December. He collected stem-borers and flea beetles being evaluated as biological control agents for the climbing fern, *Lygodium microphyllum*. **Jeff Makinson** recently found another stem-borer in Hong Kong; the third species found thus far that feeds on *Lygodium* spp. **Dr. John Gaskin** from the USDA-ARS laboratories in Sidney Montana visited ABCL in December. John was collecting samples of *Casuarina* for molecular analysis. Three species of Australian *Casuarina* are serious weeds in Florida, USA. **Dr. Greg Wheeler** (USDA, Florida) recently visited ABCL and conducted joint surveys with for *Casuarina* biological control agents with **Dr. Gary Taylor** and **Matthew Purcell**. Matthew and Greg also visited China, working with **Dr. Ding Jianqing** from the Chinese Academy of Sciences to find biological control agents for the submerged aquatic weed, *Hydrilla verticillata*, and Chinese tallow tree, *Sapium sebiferum*.

Matthew PURCELL

University of Queensland

Myron Zalucki, **Gimme Walter** and **Paul Ebert** remain on study leave. Paul is taking advantage of the *Tribolium* genome sequencing effort to look at resistance-linked genes and hopes to bring strains back to Brisbane. **Paul Cunningham** who worked as s post-doc with Myron Zalucki is

back for a while, on study leave from his position at University of Liverpool.

In September PhD students **Rukmowati Brotodjojo** and **Mary Finlay-Doney** attended the International Conference on Behavioural Ecology of Insect Parasitoids in France.

Julie-Anne Popple who completed honours first class in mid 2006 supervised by **David Merritt** is to start a PhD (APAI) this year with **Steve Simpson** at University of Sydney, School of Biological Sciences, working on locust genetics and swarming.

Kathie will work on gland development in Drosophila and **Evan Davies** will work on circadian rhythmicity of insect bioluminescence (both with David Merritt), whereas **Lauren Hedges** will do honours with Karyn Johnson on defence mechanisms of Drosophila to virus infection.

Visiting scientist **Junxi Jiang** who has been visiting **Karyn Johnson** will return to China in February after a year looking at genetic diversity in Sugarcane viruses that are vectored by planthoppers.

David MERRITT

Alan Fletcher Research Station, Sherwood

Bill Palmer and **Wilmot Senaratne** visited quarantine facilities at Floreat Park in Perth, CSIRO Black Mountain in Canberra, Frankston Research Institute in Frankston and AAHL at Geelong in preparation for planning new quarantine facilities at the proposed Ecosciences Precinct in Brisbane. The Ecosciences Precinct is now in the schematic design phase with actual construction to start in late 2007.

Michael Day travelled to PNG in October as part of the ACIAR-funded Biocontrol of Chromolaena project. The gall fly continues to impress with substantially less chromolaena been seen around the Gazelle Penninsula, East New Britain than when he last vsited in March 2005. He also visited a number of islands in Milne Bay Province where gall flies were released on previously unreported infestations.

Michael DAY

WESTERN AUSTRALIA

Centre for Forensic Science UWA

Michelle Harvey had her PhD passed titled A Molecular Study of the Forensically Important Calliphoridae (Diptera): Implications and Applications for the future of Forensic Entomology. This thesis finished with 8 published papers. Michelle has recently taken a tenured senior lecturer position at University of Portsmouth.

Recently **Ian Dadour** returned from Algeria where he was invited to attend the XVIIemes Journees Internationales Mediterraneennes de Medecine Legale in Constantine and presented a paper on Forensic Entomology in the new millenium. Early 2007 Forensic entomology workshops are being conducted for Queensland Police in Brisbane and Townsville. Later in May Ian travels back to the US to teach his third group of FBI agents as part of the Human Remains Recovery Course at the University of Tennessee.

Curtin University of Technology

Christopher Taylor (c.taylor1@student.curtin.edu.au) has come from New Zealand to do a PhD on the systematics of Australasian long-legged harvestmen (Monoscutidae; Opiliones), with **Jonathan Majer** and **Mark Harvey** of the Western Australian Museum as associate supervisor. He is hoping to put the taxonomy of the family on a surer footing than it currently occupies. If anyone has specimens they would like to donate, they would be gratefully accepted, especially if they are in 100% ethanol and usable in molecular work. **Gamal Orabi** has successfully defended his PhD thesis and has returned to lecture at the University of

Suez Canal. Gamal made an objective, *post priori* evaluation of which vertebrate and invertebrate groups were the best indicators of changes in the post-mining environment and which were the best surrogate taxa for the biota as a whole. The verdict? Hemiptera for the former and ants for the latter.

Brian Heterick is putting the finishing touches to his monographic work on the ants of south-western Australia after a final visit to the ANIC to look at type specimens. **Brad Durrant** (Department of Conservation and Environment) has been assisting with the drawings, which have now been completed for the monograph – well over 700 of them! This guide will help the reader identify workers of all currently recognised ant species found in a region bounded by Shark Bay in the north, Southern Cross in the east and Cape Arid NP on the SE coast.

WA Department of Agriculture & Food

Just before Christmas, currant lettuce aphid was detected in lettuce near Perth. Whilst this pest has been making its way from Tasmania onto the mainland, its arrival in WA was much earlier than expected. **Sandra McDougall** from NSW Agriculture made a flying visit to WA to attend a grower meeting with **Sonya Broughton** and **David Cousins**.

Murdoch University

Modika Perera from the Plant Biotechnology Research Group is compiling additional data collected during her GRDC Fellowship on aphid resistance in grain legumes. She also studied the plant leaf structure of different aphid susceptible and resistant commercial cultivars- *Lupinus luteus* - Wodjil and *L. albus* - Kiev mutant (anthracnose susceptible) and Andromeda (new anthracnose resistant cultivar) using scanning electron microscopy (SEM).The results obtained were very interesting and correlated well with the plant leaf structures of these legume crops. Aphid resistant cultivars kiev mutant & andromeda have a compact epiderminal cell structure, less intercellular spaces, less number of stomata, have thick & high number of trichomes compare to the aphid susceptible cultivar wodjil. This work was carried out in collaboration with **Mike Jones** and **Bernie Dell** at Murdoch University.

Modika also was involved in organising the fifth biennial "Nematodes in cropping systems, identification and techniques" short course run by **Mike Hodda** (CSIRO-Entomology, Canberra) and **Kerry Davis** (University of Adelaide) which was held at Murdoch University in November 2006. This was the first time this course was held outside Adelaide or Canberra. **Mike Hodda** and **Kerry Davis** both have PhD's in insect-related disciplines but both their work now involve in nematology. **Kerry Davis** presented a very interesting seminar entitled "*Fergusobia* nematodes and *Ferusonia* flies-gall formers on Myrtaceae". This special seminar was presented on behalf of the Australasian Plant Pathology Society (APPS) and ended the seminar series with sundowner at the WA State Agricultural Biotechnology Centre.

Sonya BROUGHTON

VICTORIA

Centre for Environmental Stress and Adaptation Research, University of Melbourne

Jon Martin traveled to Japan in September for the 6th International Congress of Dipterology in Fukuoka, where he presented a paper in the Chironomidae workshop. The Japanese Chironomidologists also held their 17th Annual Meeting in Fukuoka immediately prior to the Dipterology Congress and Jon was an invited guest speaker. The Japanese group is very active in areas of systematics, including molecular systematics, and ecology. Prior to these meetings Jon visited his colleague **Kimio Hirabayashi** at Ueda and presented a seminar at the Shinshu University.

Melbourne Museum

Over the past few years, Museum Victoria has employed contract staff to database significant portions of the collection. Groups now databased include bees, butterflies, carabids, cicadas, cerambycids, tenebrionids and scarabs. In November 2006, we completed the full data capture of the Trichoptera collection - over 50,000 "lot" registration with each lot averaging 10 specimens. We have also just embarked on a 12 month data/image capture project to register and image capture all of the Australian primary types held in the insect, arachnid and myriapod collections and in February 2007 will begin data capture of the Bupresitid collection. These registrations and images will be made publicly available on the OZCAM website (http://www.ozcam.gov.au) .

While on the subject of databasing, in November 2006 Ken Walker attended the GBIF Pollinators Initiative workshop in Amsterdam. This project has the view to providing a world bee names (including synonymies) checklist, approximately 20,000 valid species and over 1 million databased specimen distribution records.

Also in November, Ken, Richard and Peter conducted a week long "Bug Blitz" with 60 Grade 9 students on a sheep property in central Victoria called Narmbool. The students arrive in groups of 10 from 6 schools around Victoria; the property is owned by Sovereign Hill; and all travel, accommodation and food expenses are covered by the Huge Williamson Trust - a foundation that promotes youth leadership programs in Victoria. E.O. Wilson pioneered the Bug Blitz idea in the USA and it is designed to deliver a short and intensive time showing and talking about invertebrate biodiversity. The week before the "Bug Blitz" we visited Narmbool and put in pitfall and malaise traps at three different habitat sites. During the student week, we hiked around the property observing the cleared, revegetated and original forest habitats on the property and collected specimens from the traps set the previous week. In addition, we collected aquatic specimens from the seven property dams built in 1970 and night time light trapping. The students learn to differentiate the specimens into major groupings and observe the faunal differences that occur between the three habitat sites and the trapping techniques. The intriguing aspect of the Australian Bug Blitz is that we combine sciences with the arts and the students are given a course in art of puppetry by a fulltime professional puppeteer - both in making puppets and putting on a puppet show. At the end of the week, the students break into groups of 6 to build and present a puppet show on some aspect of the biology they have observed on the Narmbool property. The results are often amazing such as an interview with a platypus puppet on whether or not an exotic willow tree, which is where the resident platypus actually lives, should be removed from the property; or building all life stages of the ultimate Narmbool bug. The puppetry allows the students to present science in a fun and interactive way and something that the students have developed themselves. This is the third year we had done this activity and we continue to be impressed with its ability to engage the students, in particular the male students.

The PaDIL (Pests and Diseases Image Library http://www.padil.gov.au) web project now has diagnostic images as well as taxonomic, host and distribution information for over 700 exotic and endemic pests and almost 100 diseases. Most of pest images are montaged images which provide an amazing amount of detail in a single image. A good example is a lateral zoom image for the minute exotic electric ant which has recently invaded north Queensland http://www.padil.gov.au/viewPestZoomify.aspx?id=623&img=5189 . Many thanks to the AQIS and state DPI collections and overseas institutions who have loaned specimens for image capture. Others involved in the project include Mike Grimm (WA Dept of Ag), Tony Clarke and Amy Carmichael (QUT), Laurence Mound (ANIC), Glynn Maynard and Jacek Plazinski (DAFF - OCCPO) and Simon McKirdy (when at PHA, now at CRC NPB). Dr Mali Malipatil's team at DPI Vic is about to add a range of Hemiptera pests to PaDIL. Dr Roger Shivas and Dr Jose Liberato developed the disease entries at the QDPI&F herbarium. As Australia prohibits the importation of live diseases into Australia, Roger and Jose used their extensive overseas networks to gain cooperation from 81 pathologists in 15 countries to obtain images of spore fruiting bodies and disease symptoms. Roger and Jose then wrote all of the taxonomic and symptoms notes. A good example of their work is the webpage on the exotic "Eucalyptus rust" - http://www.padil.gov.au/viewPestDiagnosticImages.aspx?id=415

Department of Primary Industries, Victoria

During September 2006 Mali Malipatil attended the 6th International Congress of Diptera at Fukuoka and presented a paper on *Liriomyza* leafminers of economic significance to Australia, based on the work undertaken as part of the recently completed ACIAR project lead by Peter Ridland.

After the Congress he visited a few collections notably those at Kyushu University, Osaka Museum of Natural History and the National Science Museum Tokyo where he spent time with Dr Masaaki Tomokuni and Dr Ishikawa (of Tokyo University of Agriculture) examining reduviids and other heteropterans and having discussions on taxnomy of these bugs. He then visited Prof Wanzhi Cai, whom he had known for over 25 years, and several of his students at Chinese Agricultural University Beijing for a couple of days working on Chinese heteropterans particularly reduviids and lygaeids. He also visited Institute of Zoology, Chinese Academy of Sciences (Dr Chen) in Beijing and also Institute of Applied Entomology Hangzhu University Collection (Profs Shu-Sheng Liu and Xue-xin Chen) having discussions on taxonomy of several agricultural insect groups including leafminers, parasitoids and heteropteran bugs.

John Wainer has continued with APPD databasing and validation work, and recently along with Mali is contributing to PaDIL digital imaging for Ken Walker

Mali and his team of insect, fungal and nematode taxonomists at DPI Knoxfield recently won National Quarantine Award - Public Sector Award for "outstanding contribution to maintaining Australia's quarantine integrity". Mali received the Award from Hon Peter McGuaran Minister for Agriculture, Fisheris and Forestry at Parliament House in Canberra.

On the 24th of September 2006, Linda Semeraro represented Mali and the Victorian Agricultural Insect Collection at the Council Head of Australian Entomological Collections (CHAEC) in Adelaide. More recently (12th –13th Dec 2006) she attended a Fruit Fly Identification Workshop held at EMAI, (NSW DPI , Menangle). The workshop gave participants instructions and hands on experience in using a new molecular diagnostic test, developed by Deborah Hailstones and Peter Gillespie (of

NSW DPI). This molecular test proves to take even less time than the molecular test currently used in DPI Victoria, and encompasses a broader range of exotic fruit flies. The workshop was a great opportunity to meet other people working in molecular diagnostic laboratories interstate and to discuss various problems with identification of some fruit fly species complexes. It was also a great chance to have a quick tour through the Queensland fruit fly factory at EMAI.

The 2007 Australian Entomological Society Conference

The next AES Conference will be in Victoria. To assist suffering rural economies, the organising committee decided to hold the meeting at scenic Beechworth in north eastern Victoria. Several adjacent areas experienced major bushfires during December 2006, and this is an opportunity to assist these communities. Beechworth is a historic town that is strategically located at the base of the Victorian alps and amongst the vineyards and other produce outlets that the region is famous for. Beechworth is accessible by plane to Albury (with airport shuttle bus to Beechworth), or by train to Wangaratta from Melbourne. It is an easy drive from Melbourne, Sydney, Canberra and even Orange.

The dates for the 2007 Conference are Monday September 24 – Wednesday September 26 (with registration and opening social on late afternoon and evening of Sunday 23 September). The location is the La Trobe University campus – the former mental hospital (very appropriate for an entomological meeting). It is set in a very relaxing garden environment, and it has a full range of accommodation options that ranges from budget through to several stars. There are plenty of alternative accommodation venues in Beechworth and in nearby towns. Beechworth is close to other regional historical towns, the alps (for bushwalking), vineyards, restaurants, etc. It is an ideal venue for members to bring their family for a holiday.

More details and a call for expressions of interest for registration will be placed on a conference web site that will be set up in February and on the AES web site (www.austentsoc.org.au). If you have ideas or questions, please e-mail Alan Yen at alan.yen@dpi.vic.gov.au.

SOUTH AUSTRALIA

Instead of the traditional Christmas lunch, a number of South Australian members got together for a 'Welcome to 2007' lunch at the Stag Hotel on Jan 10th. Photos in next issue of ***Myrmecia***.

The University of Adelaide

"*What Wasp is That? An Interactive Guide to the Australasian Families of Hymenoptera*" published by ABRS and CBIT is about to be released. This Lucid key is the culmination of several years work by **Nick Stevens, Claire Stephens, Muhammad Iqbal, John Jennings, John LaSalle** and **Andy Austin**.

Katja Hogendoorn and **Mike Keller** have received renewed funding for research on the domestication of bluebanded bees. Their ARC linkage grant is supported by Biological Services, Perfection Fresh and Timbercorp.

Nick Murphy, Andy Austin and **Mark Adams** have been awarded an ARC Discovery grant to study the "Evolution of the unique fauna of the Great Artesian Basin mound springs: the impact of aridification and climate change".

Andy Austin and **John Jennings** are off to Ohio State University, Columbus in February to attend a planning workshop for the Platygastroidea Planetary Biodiversity Inventory program funded by NSF and led by Norman Johnson and Andy Austin. Some 22 researchers from 9 countries will be working on this project over the next 5 years.

Wahizatul Afzan Azmi from the Department of Biological Sciences, Kolej Universiti Sains dan Teknologi Malaysia is commencing her

PhD with **John Jennings** in February. Her research topic is "The use of aquatic insects in water quality classification" and she will be undertaking a comparative study of both natural and man-made systems in the east coast peninsular of Malaysia and in southern Australia.

Anita Juen is a new ARC Postdoc in **Mike Keller**'s lab, where she will work on identifying the remains of prey in the guts of arthropod predators. Anita completed her PhD at Leopold Franzens University in Innsbruck, Austria, and was Assistant Professor there prior to taking up her current position.

Helen Degraaf was awarded First Class Honours for her study of the feeding behaviour of lycosid spiders.

Dr **Sylvia Clarke** graduated in December for her thesis on arthropod community ecology in the Flinders Ranges.

Lars Krogmann from Germany arrives mid January and will be working in the Austin group on pompilid wasp systematics. His work is funded under the Humboldt Fellowship Scheme.

Bob Hill, Andy Austin, Michelle Guzik, Nick Murphy, John Jennings and a number of others have been organising the 5th Southern Connection Conference 21-25 January 2007 at The University of Adelaide. Southern Connection is an international conference focused on southern hemisphere biology and biogeography, and attracts many overseas researchers. See http://www.ees.adelaide.edu.au/events/Southern_Connections/index.html

Mike Keller has completed his role as Joint Acting Head of School after 22 months in the role, and has resumed the position of Deputy Head of the School of Agriculture, Food and Wine.

Andy Austin and **John Jennings** and their combined research groups are about to move into renovated laboratories and offices on the ground floor of the Darling Building on the North Terrace Campus. This move consolidates much of the university's entomology teaching and research which was previously spread over three campuses.

SARDI Entomology

The Waite Festival was held in November on the lawns of the University of Adelaide Waite campus. SARDI and University of Adelaide entomologists showcased their biological control projects with various live and printed displays. There was a huge turnout to discover the role our scientists play in producing our food and drinks. Culinary delights associated with research were able to be enjoyed as well as live entertainment.

A guidebook ('REVEGETATION BY DESIGN' *A guide to using selected native plants to reduce pests and diseases in the horticulture region of the Northern Adelaide Plains)* has been developed for growers, the community, industry, education institutions and local government use. The Guidebook produced by **Peter Taverner**, **Glenys Wood**, **Dijana Jevremov** and **Bill Doyle**, is a product of the Revegetation by Design project, and was launched on November 30th at Playford City Council. The event was presided over by Mayor Martin Lindsell and attended by **Peter Taverner**, **Glenys Wood**, **Nathan Luke**, **Dijana Jevremov** and **Tony Burfield**, several growers and members of the community. This will be a guiding document for growers to select native plants species to favourably alter the invertebrate balance (insects, spiders, mites etc.) to one that is specifically tailored to thrips reduction. Mayor Lindsell and prominent grower representative Maria Yfantides, then visited the SARDI Revegetation by Design project team on the Waite Campus. They were fascinated by the diversity of insect fauna in the Waite Insect and Nematode Collection and enthusiastic about the potential of native vegetation to provide real benefits to growers and the wider community.

BELOW: Tony Burfield congratulates grower Bill Cafcakis on receiving his guidebook and certificate to acknowledge his support of the project

Glenys Wood and **Richard Glatz** have obtained a further three years funding (mainly through HAL and RIRDC) for the next stage of the Revegetation by Design research program. Research will be aimed at understanding the plant characteristics that fundamentally regulate the ability of Western Flower Thrips to oviposit. An *in vitro* screening system will also be developed to test thrips oviposition on a range of plant species and which could be adapted to testing resistant cultivars, thrips control treatments or thrips-related virus transmission.

Ken Henry and **Judy Bellati** recently launched the successful "PestFacts" newsletter for SA and western Victoria, which provides information and updates from consultants, agronomists, farmers & researchers on invertebrate pests in broad acre crops throughout the growing season. PestFacts is supported by the GRDC's National Invertebrate Pest Initiative (NIPI). For the benefit of NIPI, Ken and Judy developed some fundamental 'hands on' training activities based on the types of insect identification conducted through the SARDI diagnostic service (provided last season to PestFacts subscribers) to assist advisors and growers with correct identification. Ken and Judy then conducted a well-received workshop on general insect identification for the Independent Agronomists Association. The workshop provided advice on basic diagnostic characters for correct identification of pest larvae types, aphids, mites and beneficial insects as well as touching on resistance and IPM issues. More workshops of a similar nature are scheduled for this February as a result of the high demand for entomological education and support services.

John JENNINGS

GENERAL NEWS

10 October 2006

Re: Proposed Closure, Centre for Entomological Research & Insecticide Technology (CERIT) University of New South Wales.

Circulation: All CERIT clients, collaborators, friends and bulletin recipients

Dear Colleagues,

It is with considerable sadness that I write to advise you that I have been instructed to put in place a plan to close CERIT at the earliest opportunity. Due to outstanding commitments to clients, effectively this means by the end of 2006.

Why has this become necessary ?

Most of you will be aware that government funding of Australian universities has declined in real terms over the past two decades. The finances of universities, including UNSW, now are under such pressure that extreme measures have had to be put in place to ensure that core activities can be maintained at an acceptable quality. One of these measures has been the introduction of 'space charges' which now are being levied against all Schools, Faculties, Centres and other units of UNSW. This measure transfers to these units, part of the infrastructure costs of the university. Schools and Faculties, being centrally funded by the federal government, deal with this (with increasing difficulty) by re-structuring their budgets. However for CERIT, which has to self-fund, this has resulted in a space charge of $132,000 per year for the foreseeable future which we would have to generate as new revenue. Being painfully aware of the perilous state of entomology in Australia and our limited means, but wishing to retain at least some of CERIT's present activities, my response to this situation was to offer to reduce CERIT's footprint by more than half and to direct the centre in an honorary capacity in the short term, in the hope of generating a new viable business plan in the longer term. However with further 'user-pays' charges to be considered, we still would face an additional annual charge of over $80,000 pa to keep the centre alive.

CERIT is one of the few UNSW centres which is focused entirely on industry linkage. In its 20 years of operation it has raised **all** of its direct costs (salaries, equipment, materials and operational overheads) through its research, training, quality management and other services provided to the urban and commercial pest management, animal health and associated industries. However the available business margin and the 'significant overheads' nature of CERIT activities have meant that its business plans never could cover all of its infrastructure costs (e.g. rent on space utilised, power, security, cleaning, etc). The point has been reached where UNSW can no longer bear these costs and unfortunately in the present economic climate, I am not confident of raising the level of recurrent funding needed to ensure CERIT's sustainability.

Achievements of CERIT

I am extremely proud of CERIT's achievements over the past 20 years. These have been made possible by the energetic, dedicated efforts of the present and past CERIT teams and I owe it to them to ensure that their hard work is acknowledged. Accordingly, I wish to share with you, some examples of the most significant contributions made by CERIT to the areas of Australian urban, commercial and animal health pest management - all thanks to the efforts of these fantastic people.

Since its inception in the mid-1980s CERIT has:

Carried out significant research programs which resulted in or contributed to (for example):

o Development of new classes of insecticides and bioassay of their activities and modes of action - in collaboration with CSIRO Molecular Science (C. Virgona);
o New uses for pyrethroid insecticides on animals and analysis of potential for resistance when used in this way (C. Orton, M. Shivas);
o Development of new strategies for management of Australian Sheep Blowflies, especially in the arid zone (J. Anderson);
o The first successful laboratory rearing of Buffalo Flies and the development of bioassays using this pest (J. Anderson);
o Establishment of an automated aerosol testing facility to facilitate improved performance of household aerosol insecticides during formulation transitions through kerosene-, water-, CFC- and hydrocarbon-based media (E. Shipp, C. Orton, P. O'Rourke);
o Design and implementation of new protocols for rapid screening of chemical inventories for several modes of insecticidal activity (M. Baker, D. Lilly).

Developed over 30 insecticide efficacy testing protocols and assisted many companies in developing, testing, registering, QA-managing and fault-finding pest management products;

Developed numerous laboratory insect culturing methods and supplied live insects to a wide range of outside organizations for research, teaching, bio-security and other purposes;

Co-ordinated 10 annual industry briefing symposia on pertinent Australian urban & commercial pest management topics;

Co-ordinated for 3 years, the third-year UNSW undergraduate Biology unit 'Insect Diversity and Management'. This rated very highly in student feedback but sadly lost its funding in one of the many rounds of financial belt-tightening;

Raised significant, ongoing grant and industry funded research funds for UNSW which attracted government supplementation;

Established and implemented a protocol for analysis of insect adulteration of products and provided an independent analytical service for insect adulteration of products for the food and associated industries;

Assisted many companies to solve or plan to avoid, problems relating to insect infestations in industrial facilities, warehouses, food businesses and workplaces - in collaboration with other entomologists and pest managers;

Contributed to, supported, provided services to or chaired several industry committees and working parties (e.g. AEPMA, PestCert, industry insurers, ITAB);

Carried out several efficacy and safety reviews of insecticide products on behalf of the Australian Pesticide and Veterinary Medicines Authority;

Wrote the quality criteria documents for Continuing Professional Development in urban and commercial pest management which were adopted by the PestCert industry accreditation scheme and the industry insurers. Currently CERIT acts as the principal appraisal body of CPD activities for the industry;

Provided entomological work experience and practical on-the-job training for more than 35 people;

Provided information or referred-on to other appropriate entomologists, many thousands of insect management enquiries (phone, email and mail) from the general public, industry and the media;

In July 2006, received an award from the industry accreditation body PestCert, "For outstanding contribution to the development and promotion of pest management industry professionalism".

And much moreŠŠ.

What will be lost in the proposed closure of CERIT ?

The proposed closure of CERIT should be seen in the context of the current serious crisis in Australian entomology. I am advised by colleagues in other universities that it is no longer possible to undertake a degree providing comprehensive entomological training, anywhere in Australia * and that due to the small numbers of entomologists employed in Australian research institutions and universities, opportunities to undertake higher degrees in entomology now are severely limited. This means that, not only are we failing to cater for Australia's future needs for practicing entomologists to research and solve insect problems affecting our agriculture, health and bio-security but also we are failing to train the trainers badly needed by the urban and commercial pest management industry - which safeguards our quality of life and is our second line of defence in bio-security. It is ironic that on the day that the decision to close CERIT was communicated to me,

Professor Max Whitten, Dr Jim Peacock (both former Chiefs of CSIRO Entomology) and Peter McGauran (Federal Minister for Agriculture - with responsibility for Australia's Quarantine) alerted the country to the fact that Australia's bio-security now faces a significant risk due to the lack of expertise in entomology and related areas.

Given the scarcity of available entomological training, the very few young Australian entomologists already in the system, the high probability of increased Australian insect problems accompanying global warming and recent serious incursions of insects with huge potential to threaten the quality of life of Australians (e.g. the Red Imported Fire Ant, the Yellow Crazy Ant and now the Electric Ant), the closing-down of **any** Australian entomological institution is pure madness!

Nevertheless, it is pertinent to examine some specific examples of what will be lost with the closure of CERIT. I have indicated with an asterisk, those examples where to the best of my knowledge, the service is either unavailable or of very restricted availability elsewhere in Australia:

New research programs relating to urban and commercial pest management, some of which are already in late stages of planning; *

Provision of live insects, particularly houseflies and blowflies, to other organizations - e.g. to Australian Quarantine & Inspection Service for bio-security testing, to companies for in-house product development and to educational institutions for teaching; *

Provision of CERIT Annual Industry Briefing Symposia, which have become the benchmark for Continuing Professional Development activities in the Australian urban and commercial pest management industry; *

Provision of independent analysis and research services relating to insects adulterating product samples; *

A source of independent advice and referral to other information sources, for the general public, industry and the media on insecticide use and urban and commercial pest management;

Insect management product initiation and development advice, R&D services, Q-A and resistance analysis research - especially those relating to urban and commercial insecticides; *

Independent advice and consulting services (provided in collaboration with pest management contractors) to companies wishing to overcome protracted insect pest infestations in manufacturing facilities, warehouses and workplaces;

A totally independent voice on urban and commercial pest management industry committees and working parties; *

A source of entomological research work experience for prospective new entomologists and pest managers interested in urban and commercial pest management; *

Facilities and expertise to rapidly screen chemical samples for several insecticidal modes of action.

Potential for a Rescue Package for CERIT

Several people have asked about a potential rescue package for CERIT. From my knowledge of the financial situation at UNSW and after many months of working on the problem, while there is significant in-principle support, I do not believe that there is any chance of an internally-funded rescue. Our Faculty (Science) and School (Biological Earth & Environmental Sciences) both are under pressure from deficit budgets, so providing additional funding at the level of around K$80 per year is simply out of the question. As for external funding - I do not rate the potential highly here either, especially since the urban & commercial pest management industry peak body (AEPMA) and accreditation program

(PestCert) both are working very hard to maintain financial sustainability. Also several recent attempts to identify other potential external CERIT funding have proved fruitless. However, I would be very happy to hear from anybody who can advise otherwise.

Proposed program for CERIT closure

As you can imagine, the job of closing down a unit with a multitude of functions, that has been operating for over twenty years, is a complex one which will take months to complete. Also there are outstanding commitments to clients which need to be fulfilled. As I write this, I am assembling a closure program which still has to be finalised. **However it is probable that CERIT's last day of business will be Friday December 15** so that any outstanding invoices can be transmitted to UNSW Admin for processing in the week before year end. **If we supply insects or services to you, I would appreciate it if you could advise me at the earliest opportunity of any requirements from now until 15 December.** Also, I would be happy to discuss with you, what prospects if any, exist for alternative supply after CERIT has closed.

Line of Accountability for CERIT

I have been asked by several people to indicate the line of accountability within UNSW for CERIT. This is as follows:

Senior entomologist directing CERIT Operations - Christopher J. Orton, BSc., PhD., Director, CERIT, UNSW SYDNEY NSW 2052, Phone (02) 9385 0347, Email c.orton@unsw.edu.au

Senior Faculty academic responsible for all UNSW Science activities - Professor Michael Archer, BA(MCL), PhD., Dean, Faculty of Science, UNSW SYDNEY NSW 2052, Phone (02) 9385 7915, Email m.archer@unsw.edu.au

Senior university manager responsible for all UNSW Research activities - Professor Les D. Field, PhD., DSc., FAAS, Deputy Vice-Chancellor (Research), UNSW SYDNEY NSW 2052, Phone (02) 9385 2700, Email l.field@unsw.edu.au

Future for CERIT team members

I have been asked also, about the future intentions of the CERIT team members. For the past year, the CERIT team has consisted of four persons. At this stage, I understand that their plans are:

David Lilly, Technical Officer - recently joined the staff of Eagle Pest Control as Technical Manager and is hopeful of pursuing a career in entomology.

Chris Virgona, Senior Visiting Fellow - has already activated his superannuation and expects to remain a Senior Visiting Fellow in the UNSW Faculty of Science but without laboratory facilities.

Patrick O'Rourke, Senior Technical Officer - still considering his future after he leaves CERIT in December.

Chris Orton, Director, - I intend to activate my superannuation and retain a connection to UNSW as a Senior Visiting Fellow in the Faculty of Science. I will continue to make whatever contribution I can, both to Australian entomology and the urban & commercial pest management industry. This will include continuing involvement in PestCert, AEPMA and ITAB NSW PMISC committees, some training projects, reviews for APVMA and limited consulting work. However I do not expect to have access to any laboratory facilities.

Regards,

Chris Orton

EMPLOYMENT OPPORTUNITY

Biosecurity New Zealand

Exciting opportunity in Plant Biosecurity

Vac: 06/272 Position: Adviser/Senior Adviser, Plants Biosecurity Surveillance Location: Wellington

Looking for a challenge? Keen to make a real difference? We are seeking a committed and enthusiastic person to join the newly established Biosecurity Surveillance Group - assisting Biosecurity New Zealand to protect New Zealand's unique environment and the kiwi way of life.

'Biosecurity' is the protection of New Zealand's economy, environment and people's health from pests and diseases. It includes preventing the arrival of exotic pests and diseases and eradicating or controlling those already present. Biosecurity New Zealand is the lead agency in New Zealand's biosecurity system and it has been tasked with a 'whole of system' leadership role encompassing economic, environmental, social and cultural outcomes across terrestrial, freshwater and marine ecosystems.

The successful candidate will be part of the plants surveillance team. Duties will include developing, managing, and providing technical support for surveillance programmes, prioritising surveillance activities, improving systems and capability and national disease and pest status reporting. You will interact with other teams within Biosecurity New Zealand and also with national and international stakeholders and technical experts.
You will have a plant science degree or a degree in a related discipline with relevant post graduate qualifications and/or experience in the horticultural industry. In addition, we are seeking a person with experience in surveillance for pests and diseases affecting plants. A background that includes entomology and/or plant pathology is desirable but not essential. You will also have excellent communication skills and be familiar with the principles of project management, contract delivery and quality management.

The position is based in Wellington, New Zealand's centre of government and the world's southernmost capital city. It's also New Zealand's cultural capital; home to the internationally acclaimed Te Papa museum, hosts the renowned biennial Festival of the Arts, and has more cafes per capita than New York!

Visit www.maf.govt.nz (click on Employment in MAF) to obtain a job description and apply online or contact Donna Butterfield on phone 04 894 0320 or email donna.butterfield@maf.govt.nz for an application pack. Owing to the Christmas break enquiries will not be answered until 08 January 2007.

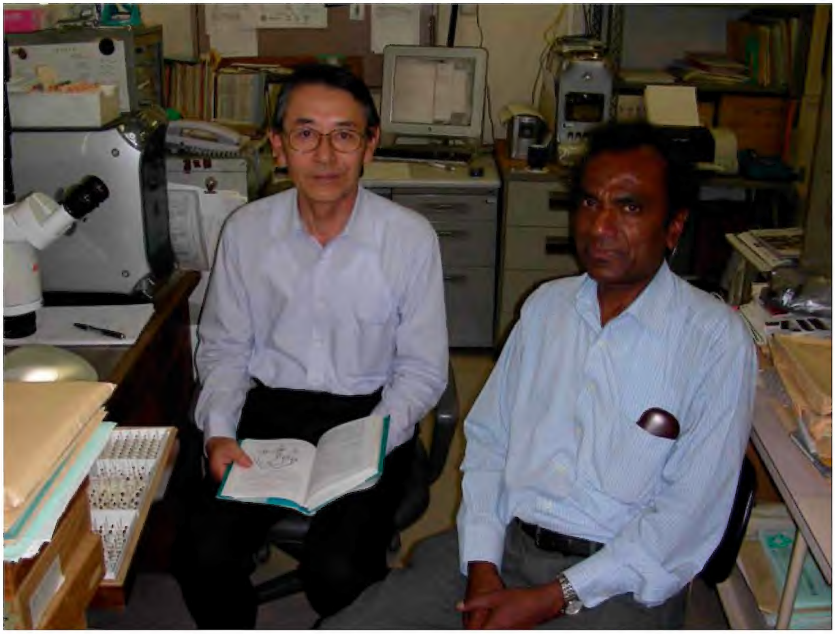
Applications (quoting the appropriate vacancy no.) can also be sent to: Donna Butterfield, MAF Biosecurity NZ, P.O. Box 2526, Wellington by 5pm 22 January 2007.

Applicants must hold (or be willing to obtain) a current New Zealand work permit or be a New Zealand resident.

1. ABOVE: Ken Henry, Gabriella Caon and Glenys Wood at the 'Good, Bad and Beautiful' entomology display at the Waite Festival (see page 17). BELOW : Authors of the Guidebook; Bill Doyle, Dijana Jevremov, Peter Taverner and Glenys Wood at the Revegetation by Design experimental site (see page 17).

ABOVE: Richard Glatz, Maria Yfantides, Mayor Lindsell, Craig Feutrill and Tony Burfield taking in the insect collection at Waite (see page 18). BELOW: Entomologists gathered in Orange in November for yet another entomologist's wedding (see page 6).

ABOVE: Stephen Goodwin and Marilyn Steiner (see page 6). BELOW: Mali with Masaaki Tomokuni at the National Science Museum Tokyo discussing reduviid bug taxonomy (see page 15).



ABOVE: Dr Sylvia Clarke at her graduation from The University of Adelaide with proud supervisors Andy Austin (L) and Jose Facelli (R) (see page 17). BELOW: The 2007 Entomologists of Orange Xmas lunch

ABOVE: COL Raj Gupta, Steve Frances and Ken Linthicum at the ASTMH meeting in Atlanta GA (see page 11).

MEMBERSHIP NOMINATION FORM

To obtain a nomination form, please download from
http://www.agric.nsw.gov.au/Hort/ascu/myrmecia/aesmemform.pdf.

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